

REMARKS

It is respectfully requested that the foregoing amendments be entered and fully considered by the Examiner in connection with Applicants' filing of a Request for Continued Examination in connection with the above-identified application. As can be seen from the foregoing amendments, claims 1, 3 and 8 have been amended in order to better define that which Applicants regard as the invention. As previously, claims 1-10 are presently pending in the instant application.

With respect to the Official Action dated October 17, 2002, Applicants provide the following comments.

Referring to the Official Action and particularly page 2 thereof, claims 1-10 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,168,991 issued to Choi et al. and U.S. Patent No. 5,571,746 issued to Pan. This rejection is respectfully traversed in that the combination proposed by the Examiner neither discloses nor remotely suggests that which is presently set forth by Applicants' claimed invention.

As can be seen from the foregoing amendments, Applicants' claimed invention as set forth in independent claim 1 is directed to a method for fabricating a semiconductor device including a capacitor device having a lower electrode including the steps of forming a conducting film to be formed into the lower electrode with the conducting film to be formed into the lower electrode comprising a multilayer film composed of a lower conducting film and an upper conducting film and including a step of forming a conducting film to be formed into the lower electrode including the sub steps of forming the lower conducting film by sputtering over a

substrate and forming the upper conducting film directly on and in contact with the lower conducting film by CVD. In doing so, since the lower conducting film is formed by sputtering, the morphology of conducting film to be formed on to the lower electrode is improved which improves the quality of the capacitor dielectric film formed on the conducting film. Furthermore, since the upper conducting film is formed directly on and in contact with the lower conducting film by CVD as specifically recited in independent claim 1, the conducting film to be formed in to the lower electrode attains a uniform thickness. Therefore, the conducting film to be formed into the lower electrode is minimally agglomerated during annealing for forming the capacitor dielectric film.

With respect to the Choi et al. reference, the Examiner readily appreciates that Choi et al. fails to disclose or remotely suggest the upper film directly on the lower conducting film. In view of this shortcoming, the Examiner relies on the teachings of Pan which the Examiner states discloses forming a capacitor comprising a lower conducting film and an upper conducting film formed directly above the lower conducting film. The Examiner goes on to state that it would have been obvious to one of ordinary skill in the art for combining the teachings of Choi et al. and Pan to enable formation of the capacitor and further capacitors have a high degree of linearity. In this regard, with respect to the teachings of Pan, this reference illustrates in Fig. 1 a capacitor dielectric 22 being placed between a bottom capacitor plate 21 wherein the top capacitor plate 21 is not formed directly on and in contact with the bottom capacitor plate 20. The bottom capacitor plate 20 and the capacitor plate 21 respectfully correspond to the lower electrode and the upper electrode of the present invention. Accordingly, it is clear that Pan fails

→ to disclose or remotely suggest that a conducting film to be formed into a lower electrode comprises a multilayer film composed of a lower conducting film and an upper conducting film wherein the upper conducting film is formed directly on and in contact with the lower electrode film as is specifically recited in independent claim 1.

Accordingly, it is respectfully submitted that independent claim 1 as well as those claims which depend there from clearly distinguishes over the combination proposed by the Examiner and are in proper condition for allowance.

With respect to independent claim 3, this claim recites a method for fabricating a semiconductor device including a capacitor device having a lower electrode, a capacitor dielectric film formed on the lower electrode and an upper electrode formed on the capacitor dielectric film which includes the steps of forming a conducting film with such formation including forming a lower conducting film over the capacitor dielectric film by sputtering and forming an upper conducting film directly on and in contact with the lower conducting film by CVD. Again, such a method is neither disclosed in nor remotely suggested by the prior art combination proposed by the Examiner.

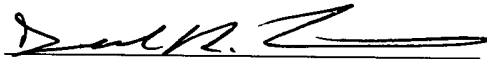
As discussed in detail hereinabove, the Choi et al. and Pan reference fail to disclose or remotely suggest the step of forming in the upper conducting film directly on and in contact with the lower conducting electrode as is specifically recited in claim 3, as amended. That is, claim 3, as amended, sets forth a conducting film to be formed onto an upper electrode comprising a multilayer film composed of a lower conducting film and an upper conducting film and includes the step of forming a conducting film to be formed into the upper electrode including the sub

steps of forming a lower conducting film by sputtering over the capacitor dielectric film and forming an upper conducting film directly on and in contact with the lower conducting film by CVD. Accordingly, for the foregoing reasons it is respectfully submitted that independent claim 3 as well as those claims which depend there from clearly distinguishes over the combination proposed by the Examiner.

Therefore, it is respectfully requested that the foregoing Preliminary Amendment be entered and fully considered by the Examiner, that claims 1-10 be allowed and that the application be passed to issue.

Should the Examiner believe a conference would be of benefit in expediting the prosecution of the instant application, he is hereby invited to telephone counsel to arrange such a conference.

Respectfully submitted,



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Version Showing Changes Made:

1. (Twice Amended) A method for fabricating a semiconductor device including a capacitor device having a lower electrode, a capacitor dielectric film formed on said lower electrode and an upper electrode formed on said capacitor dielectric film, comprising a step of:

forming a conducting film to be formed into said lower electrode including sub-steps of:

[depositing] forming a lower conducting film [on] over a substrate by sputtering;  
and

[depositing] forming an upper conducting film directly on and in contact with said lower conducting film by CVD.

3. (Twice Amended) A method for fabricating a semiconductor device including a capacitor device having a lower electrode, a capacitor dielectric film formed on said lower electrode and an upper electrode formed on said capacitor dielectric film, comprising a step of:

forming a conducting film to be formed into said upper electrode including sub-steps of:

[depositing] forming a lower conducting film [on] over said capacitor dielectric film by sputtering; and

[depositing] forming an upper conducting film directly on and in contact with said lower conducting film by CVD.

8. (Amended) The method for fabricating a semiconductor device of Claim 1,

wherein said capacitor device is a concaved capacitor device, and

wherein said lower conducting film is formed [on said substrate, and on] over an insulating film having a recess formed over said substrate.